

EVALUATION REPORT

Company Spectra-Physics Lasers
Application # 15004
Plant # 548

1. Background:

Spectra-Physics Lasers (SPL) has applied for a change of conditions (to Condition # 22622) to increase their 12 month usage of methanol from 335 to 700 gallons and to add the ability to use up to 100 gallons of isopropanol per year for sources S-2 Methanol Wash and S-4, S-6, S-9, and S-11 Wipe Cleaning Operations. To allow the operating flexibility to switch from using a precursor organic compound (POC) to a non-precursor organic compound (NPOC), allowable acetone (a NPOC) use will be also increased an equivalent amount.

2. Emission Calculations:

Based on the maximum net solvent usage SPL has requested, the following emissions increase is estimated:

Source Proposed Usage Limit

Existing Limit 335 gals/yr @ 6.6 lb/gal = 2,211 lbs/yr

New Limit 800 gals/yr @ 6.6 lb/gal = 5,300 lbs/yr (> 10 lb/day)

Increase in POC = 5,300 – 2,211 = 3,089 lbs/yr = 1.54 TPY

Increase in NPOC = 3,089 lbs/yr = 1.54 TPY

TOXICS

Methanol and isopropanol are solvents used at the facility with a risk screening trigger level. In accordance with Regulation 2-5, a risk screening is required if the following trigger levels are exceed:

Toxic Air Contaminants (TAC)	TAC Emissions ¹ (lbs/hr)	District's TAC Trigger Levels (lbs/hr)	TAC Emissions ² (lbs/yr)	District's TAC Trigger Levels (lbs/yr)
Methanol	5.3	62.0	5.3E+03	1.5E+05
Isopropanol	5.3	7.1	5.3E+03	2.7E+05

Because the estimated emissions of TACs are below any acute or chronic risk screening trigger level, an Air Toxics Screening is not triggered.

¹ For example, to estimate the “Methanol” emissions resulting from the wipe cleaning operations:
800 gal/yr x 6.6 lb/gal x yr/250 days x day/4 hr = 5.3 lbs/hr

² For example, to estimate the “Methanol” emissions resulting from the wipe cleaning operations:
800 gal/yr x 6.6 lb/gal = 5,280 lbs/yr

3. Statement of Compliance:

The Methanol Wash (S-2) and Wipe Cleaning Operations (S-4, S-6, S-9, and S-11) are used to clean optics and are be subject to and in compliance with Regulation 8-4. These sources are not subject to the aqueous cleaners requirements of Regulation 8-4-313, per Regulation 8-4-116.

The Methanol Wash (S-2) and Wipe Cleaning Operations (S-4, S-6, S-9, and S-11) are subject to the recordkeeping requirements of Regulation 8-16-501 and the storage/container requirements of Regulation 8-1-301.

Because the emissions from all sources (S-2, S-4, S-6, S-9, and S-11) are estimated to exceed 10 pound per day, Best Available Control Technology (BACT) review is required. According to the EPA Con-Co\$t Spreadsheet for thermal oxidizers, it would cost approximately \$86,000 for a 5,000 cfm thermal oxidizer (not including ducting costs). To abate 2.7 TPY of organics would result in a cost of approximately \$31,900 per ton of emissions reduced (assuming 100% capture and destruction efficiency). Because this cost is greater than our cost-effective limit of \$17,500, it would not be cost-effective to require abatement. As a result, BACT for these sources is use of controlled flow solvent dispenser (i.e. squeeze bottles), per BACT Workbook (page 179B.1). A permit condition shall be added to require use of the controlled flow solvent dispensers.

Offsets are not required for this facility, because their existing potential to emit for all sources is less than 10 tons per year.

Regulation 10 - New Source Performance Standard and Regulation 11 - Hazardous Pollutants requirements are not triggered. This application is ministerial (Permit Handbook Chapter 6.3, and hence, does not trigger the requirements of the California Environmental Quality Act (CEQA). Because the estimated emissions of TACs are below any acute or chronic risk screening trigger level, an Air Toxics Screening is not triggered.

Because SPL is within 1000 feet of Canterbury Christian School, a public notice is triggered.

4. Conditions

I recommend that Condition # 22622 be amended as follows: [underlines indicate additions while strikethroughs indicate deletions]

COND# 22622 -----

1. The owner/operator of S-2, S-4, S-6, S-9, and S-11 shall not exceed the following combined usage limits during any consecutive twelve-month period:

Methanol, <u>Isopropanol</u>	335 <u>800</u> Gallons
Acetone	335 <u>800</u> Gallons

(Basis: Cumulative Increase)

2. The owner/operator may use an alternate solvent(s) other than the materials specified in Part 1 and/or usages in excess of those specified in Part 1, provided that the owner/operator can demonstrate that all of the following are satisfied:
 - a. Total POC emissions from S-2, S-4, S-6, S-9, and S-11 combined do not exceed 2,2205,300 pounds in any consecutive twelve month period;
 - b. Total NPOC emissions from S-2, S-4, S-6, S-9, and S-11 combined do not exceed 2,2205,300 pounds in any consecutive twelve-month period; and
 - c. The use of these materials does not increase toxic emissions above any risk screening trigger level of Table 2-5-1 in Regulation 2-5. (Basis: Cumulative Increase; Toxics)
3. To determine compliance with the above parts, the owner/operator shall maintain the following records and provide all of the data necessary to evaluate compliance with the above parts, including the following information:
 - a. Quantities of each type of solvent used at this source on a monthly basis.
 - b. If a material other than those specified in Part 1 is used, POC/NPOC and toxic component contents of each material used; and mass emission calculations to demonstrate compliance with Part 2, on a monthly basis;
 - c. Monthly usage and/or emission calculations shall be totaled for each consecutive twelve-month period. All records shall be retained on-site for two years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations. (Basis: Cumulative Increase; Toxics)
4. The owner/operator of S-2, S-4, S-6, S-9, and S-11 shall use controlled flow solvent dispensers (i.e., squeeze bottles) to minimize use of solvent. (basis: BACT)

5. **Authority to Construct:**

See Section 4.

6. Exemptions:

None.

12/80-ER1

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